



The General Court of the  
Commonwealth of Massachusetts

Joint Committee on Public Safety



# Improving Fire Safety in the Commonwealth

*A Leap Forward*

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Report of the Subcommittee on Fire Safety  
Chairman Timothy J. Toomey  
Chairman Jarrett T. Barrios  
Subcommittee Co-Chair Stephen M. Brewer  
Subcommittee Co-Chair Kathi-Anne Reinstein  
Subcommittee Co-Chair Robert J. Nyman



This report is dedicated to the memory of Derek Gray, lost on February 20<sup>th</sup> 2003 in the West Warwick, Rhode Island fire.

His father, Albert Gray, was involved at every stage of research and development of the recommendations contained in this report.

Mr. Gray's advocacy and his enduring love for his son have touched the hearts and minds of the members and staff of this committee.



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# Table of Contents

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	Page
Joint Committee on Public Safety	3
Executive Summary	4
Legislative Action Taken By The Joint Committee on Public Safety	9
Introduction	11
Findings & Recommendations	
I.    Staffing Levels, Education & Training of Fire Safety Personnel	
Staffing	12
Education & Training	16
II.   Automatic Sprinklers, Fire Extinguishers and Pyrotechnic Displays	
Automatic Sprinklers	19
Fire Extinguishers	20
Pyrotechnic Displays	21
III.  Occupancy and Egress	23
IV.   Building Materials	24
V.    Interior Finishes	26
Appendices	
FY01 Firefighter Public Safety Equipment Grant Awards	28
FY03 Firefighter Public Safety Equipment Grant Awards	35
Endnotes	42

# Joint Committee on Public Safety

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Representative Timothy J. Toomey, Jr. – House Chair  
Senator Jarrett T. Barrios – Senate Chair

## Subcommittee on Fire Safety

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Senator Stephen M. Brewer – Co-Chair  
Representative Robert J. Nyman – Co-Chair  
Representative Kathi-Anne Reinstein – Co-Chair

## Members of the Joint Committee on Public Safety

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## Acknowledgments

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*The Committee would like to recognize the important efforts of the following individuals in writing and researching this report*

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## Executive Summary

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On March 13<sup>th</sup> 2003, in the immediate aftermath of The Station Nightclub Fire in West Warwick, Rhode Island, the Joint Committee on Public Safety held a regularly scheduled hearing on fire safety legislation. On this Tuesday morning, moved by the recent tragedy that took 100 lives, the committee called itself to order to hear testimony from Albert Gray and James Gahan, two fathers who lost their sons in West Warwick the night of February 20<sup>th</sup> 2003.

What emerged from that initial public testimony is contained in these recommendations. Mr. Gray and Mr. Gahan urged the members of the committee to approach the matter of fire prevention with speed and common sense. Quick action to reform fire codes to mandate sprinkler installation was the focus of their poignant statements and it is this subject that has worried many fire safety professionals for years.

The appeal of these and all families of victims did not go unheard. Following the testimony of Mr. Gray and Mr. Gahan, the committee immediately called an emergency executive session and appointed members to a Subcommittee on Fire Safety, assigned to investigate and report on the following issues:

- I. Staffing Levels, Education and Training of Fire Safety Personnel
- II. Automatic Sprinklers and Pyrotechnic Displays
- III. Occupancy and Egress
- IV. Building Materials
- V. Interior Finishes

The Subcommittee was comprised of the members of the Joint Committee on Public Safety and Co-chaired by Senator Stephen M. Brewer, Representative Robert J. Nyman and Representative Kathi-Anne Reinstein. The Subcommittee immediately began investigating these and many other fire safety concerns throughout the Commonwealth, holding public hearings in Rockland, Hyannis, Boston and Revere, Massachusetts.

After numerous deliberations, considerable research and communication with local, state and national fire safety experts, the Subcommittee respectfully issues the recommendations herein to the General Court (summarized below).

## **I. Staffing Levels, Education and Training of Fire Safety Personnel**

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Fire safety and fire prevention in the Commonwealth cannot exist without properly staffed and trained municipal fire departments. Understanding that the recent economic situation exposes all levels of state government to layoffs and cutbacks, the subcommittee nevertheless recommends funding a state wide initiative to put more fire fighters in station houses, upgrading those station houses and bolstering their effectiveness with annual equipment and training grants. The need for fire safety personnel and operative fire equipment is the most distressing finding of the subcommittee's research, and subsequently is the cornerstone of all corrective action the subcommittee advocates within this report.

Similar to the Community Policing Grants distributed every year by the Executive Office of Public Safety to municipal police departments, the subcommittee has drafted recommendations for fire departments to also have the opportunity, under a grant application process, to improve equipment, hire new personnel and train existing personnel. The Joint Committee on Public Safety has a distinguished history of advocating on behalf of fire equipment grants and the most recently (Chapter 202 of the Acts of 2002) every fire department in the state received a minimum award of \$13,000 under a \$10 million Firefighting Equipment Grant Program.

The money these municipal fire departments received could be used for a thermal imaging camera or other needed equipment, and additional money was dispersed based on a population formula. Most importantly, every fire department and fire district in the Commonwealth applied and received grants to purchase equipment such as turnout gear, hand-held power lights, communication devices, telephones, personal alert safety systems, air packs, tanks, compressors, thermal imaging devices and computerized personnel accountability systems provided. The subcommittee advocates a reauthorization of this effort and couples the concept of these grants with the concept of Community Policing Grants.

Adopting such a measure in tough fiscal times will be difficult; however the subcommittee feels strongly that fire safety in the Commonwealth is directly dependent upon the quality of its fire prevention infrastructure and the state's willingness to make this policy area a top priority.

Additionally, a lack of consistent fire and building inspections, as well as a reliable stream of revenue to fund training for and execution of such inspections, tacitly contribute to hazardous environments in places of public assembly. Without regular inspections, fire hazards persist untreated.

Recommendations include establishing regular training and certification of municipal fire inspectors, giving the municipalities the flexibility to retain fees for fire inspections, which in turn would fund the administration of inspections, and restricting the right of businesses to operate in cities and towns unless and until fire inspections are satisfactorily completed. This means that not only will fire inspections occur more frequently in this state, but they will also become essential to operating a business in Massachusetts. The subcommittee recommends that "code citation tickets" be issued for violations and that the General Court approve tougher penalties for fire code violations. The goal is to ensure that code regulations are enforced with uniformity and that violations are properly cited, recorded and eventually corrected.

The subcommittee also endorses the idea of designating a position of Crowd Manager in bars, nightclubs, dancehalls and discotheques with occupancies of 50 or more. This person,



employed by the business owner, assumes responsibility for checking the operational condition of all exits, fire extinguishers egress routes and other fire-related systems and methods throughout the building. The Crowd Manager will then have a mandatory check list to fill out, indicating that each fire safety requirement has been met and checked prior to the start of business each day. Training personnel for this position should be a condition of obtaining a Certificate of Inspection or liquor license, it should be easily executed and made available to a wide-range of employees.

Nationally, the subcommittee urges the U.S. House of Representatives and the U.S. Senate to approve the expansion of the U.S. Fire Administration's grant programs, as proposed in *S. 544 - A Bill to Establish a SAFER Firefighter Grant Program*, co-sponsored by Sen. Edward M. Kennedy and Sen. John F. Kerry. This legislation amends the Federal Fire Prevention and Control Act of 1974 to require the establishment of an office within the United States Fire Administration to administer the Staffing for Adequate Fire and Emergency Response (SAFER) Firefighter grant program. The subcommittee feels that this legislation will significantly improve Massachusetts' fire departments ability to hire additional personnel and contribute a supplementary salary-funding mechanism to ease fiscal burdens on local cities and towns.

## **II. Automatic Sprinklers, Fire Extinguishers and Pyrotechnic Displays**

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Sprinkler systems are one of the most important fire safety devices that business owners can employ. There are no recorded instances of multiple deaths in buildings with automatic sprinklers. There is less economic loss in a building fire contained by automatic sprinklers (as repairs can be made much quicker) and businesses can resume operation much faster. Subsequently, fewer jobs are lost and insurance costs are reduced. The installation and use of sprinklers also protects the safety of fire service personnel and assists in putting fire units back in service quickly and available for other calls.

The Committee on Public Safety took immediate action during the emergency executive session on March 13<sup>th</sup> 2003 to report favorably House Bill 3726, the Harkins/Balser Bill. This legislation requires that all buildings with 7500 square feet (in the aggregate) to install automatic sprinklers, as well as banning all pyrotechnic displays in dancehalls and nightclubs in the Commonwealth. The Joint Committee on Public Safety and the Subcommittee on Fire Safety unanimously endorse this legislation.

The subcommittee also recommends that the Commonwealth adopt sprinkler requirements stronger than those recommended by the National Fire Protection Association. Automatic sprinkler systems should be installed in all nightclubs, discotheques, dance halls and bars with more than a 50-person occupancy within three years.

Recognizing that the installation of sprinkler systems will be costly to smaller business owners, the subcommittee therefore endorses an accelerated tax depreciation deduction for installation of such sprinklers as a retrofit in existing nightclubs, bars, dancehalls and discotheques. The subcommittee feels that while safety should be a paramount consideration of all public assembly areas, the cost of doing safe business in the Commonwealth should not be unreasonable or prohibitive.

While it is evident that the fire which engulfed The Station nightclub would have been greatly mitigated (even prevented) if an automatic sprinkler system was present, the subcommittee

found that simply installing such a sprinkler system does not guarantee that the risks of property damage and loss of life are therefore absent. To the contrary, significant property damage and the dangers of smoke inhalation (which is the leading cause of death among fire victims) occur prior to the activation of sprinklers. Portable fire extinguishers are intended as a first line of defense against fires of varying size and degree. For this reason, the subcommittee recommends that all personnel hired in dancehalls and nightclubs should be properly trained in the use of fire extinguishers, that those fire extinguishers be regularly inspected by a designated “Crowd Manager” employed by the dancehall or nightclub, and that the Board of Fire Prevention Regulations promote and educate the public in proper usage and storage of fire extinguishers.

### **III. Occupancy and Egress**

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Grave dangers exist in places of public assembly where emergency exits are blocked, not visibly marked and when business owners, managers and personnel shirk occupancy limitations. Local fire inspectors set occupancy rates at reasonable levels in order to ensure safe escape should a fire occur and with due consideration of business owners’ objectives to maximize revenue. The subcommittee assumed responsibility to make recommendations that struck a balance between these sometimes-competing desires. Therefore, the subcommittee supports strict enforcement of occupancy limits and recommends that those who consistently violate such limits (so-called “repeat offenders”) be temporarily suspended from doing business for 30 days.

Currently, the Massachusetts State Building Code requires that multiple means of egress be available to patrons occupying dancehalls, nightclubs, bars and discotheques. While the subcommittee understands that approved methods of egress are constructed prior to obtaining the approval of a building inspector, it is also true that many of these means of egress periodically (or permanently) become obstructed. Some are ill marked, lack markings entirely or are obstructed by dim lighting, concealing paint, mistreatment or deficient preservation of exit indicators. This is a serious violation of state building codes and one that endangers the lives of every occupant. The subcommittee researched ways to improve egress where recommendations include widening main exit doors, studying ways to improve lighting and exit indicators as well as charging buildings of Use Group A-2 with maintaining daily inspection records of clear egress areas.

### **IV. Building Materials**

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Several factors other than overt methods of fire suppression (i.e., fire extinguishers, sprinklers and the like) can be utilized in places of public assembly. The subcommittee researched ways that building materials can be improved in order to create more static preventative measures and mitigate the large loss of property in the event of a fire.

The first line of defense against fire should always be fire extinguishers and automatic sprinklers. The subcommittee unconditionally supports improving the regularity of their use and installation. However, fires that rage out of control have and will withstand such suppression methods and subsequently devastate property and lives. Quickly spreading conflagrations therefore need to somehow be prevented in order to preserve the structural integrity of buildings.

One suggested method is to employ compartmentalization in new construction. Compartmentalization is a passive system that contains fire until it can be brought under control by



fire fighters. Compartmentalization limits the extent of fire and fire damage by dividing buildings into fire compartments enclosed by firewalls, fire doors and by fire-rated floors and ceilings. This means that a building, constructed using this method, could contain a fire in very a limited area – effectively “cordoning off” the fire without compromising structural integrity, endangering other occupants or resulting in significant property loss.

Currently, only hospitals, nursing homes, convalescent homes and infirmaries (under MGL Chapter 111 §51 & §71) are required to be constructed under the compartmentalization (or Type 1-B) construction approach in Massachusetts. The subcommittee recommendations expand the scope of the Massachusetts Building Code and suggest the use of compartmentalization in new construction for schools, school dormitories, assisted living facilities and respite care facilities. The goal is to protect citizens who lack or whose capability of self-preservation is limited due to underdevelopment or illness. By design, this method also protects fire fighters who respond to these fires by isolating the blaze in an environment whose conditions are better controlled.

## **V. Interior Finishes**

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The Station nightclub fire brought the issue of flame-resistant acoustic materials to the forefront of fire safety in recent months. Many places of public assembly in Massachusetts who regularly showcase live music utilize such acoustic materials without any objective means of determining whether these materials are fire-resistant, or worse, fire-stimulant.

With this in mind, the subcommittee recommendations include a total ban on foam plastics in nightclubs and bars without sprinklers until the Board of Fire Prevention Regulations can determine the safety and efficacy of such fire-resistant acoustic materials. The board shall also be charged with investigating the use of foam plastic materials, the labeling process for these materials, researching current technological developments of foam plastic materials, and incorporating the safe use of such materials into the state building code. The subcommittee suggests that the Board of Fire Prevention and Regulations also engage in educational efforts to promote awareness of the use and misuse of foam plastics.

# Legislative Action Taken by the Committee on Public Safety

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The Subcommittee on Fire Safety was obligated to delay the releasing of several very good bills before the Joint Committee on Public Safety in order to conduct this review of Fire Safety in the Commonwealth. The subcommittee wanted to make sure that any legislation that moved forward was in line with the best practices in the industry and that Massachusetts fire safety organizations were able to handle any additional requirements made by new laws.

Since completing these recommendations, the Subcommittee on Fire Safety as well as the Joint Committee on Public Safety has recommended the following bills favorably to General Court:

## House Bill 599

*An Act Relative to Providing Fire Fighters with Information Concerning Truss Constructed Buildings*  
Representative Thomas Kennedy

This legislation mandates that the Fire Marshall implement a warning system to alert Firefighters responding to an emergency that a building has been assembled using trusses, so-called, employed during construction to form a framework in order to support the roof or another part of a building's structure.

## House Bill 1733

*An Act to Build and Renovate Fire and Police Stations in the Commonwealth*  
Representative Timothy J. Toomey, Jr.

This legislation establishes a five member public safety assistance board in the Executive Office of Public Safety to authorize a public safety assistance program for the purpose of awarding and prioritizing grants to cities and towns for capital construction projects and to encourage and foster the establishment and building of joint public safety facilities. All of these grants are funded from the Public Safety Assistance Fund. Grant applications will occur from January 1 through May 1, and the grant approving board has established certain criteria for approving or rejecting grant application such as; grant application plans must be satisfactory, the project is in the cities and towns' best interest, and the city or town has demonstrated the ability and commitment to maintain the new facility. Grant approval shall be ranked in order of priority and awarded by September 1.

## House Bill 3027

*An Act Relative to Smoke Detectors*  
Representative John Fresolo

This legislation mandates that all dormitories, fraternity houses, and sorority houses be equipped with "hard wired" smoke detectors, meaning that the detectors are part of the electrical framework of the structure.



## **House Bill 3391**

*An Act Relative to Smoke Detector Responsibility Clarification*

Representative Elizabeth Malia

This legislation mandates that any landlord with at least 6 or more dwelling units must provide tenants at the beginning of each lease a description of all fire protection systems in the building, as well as an evacuation plan. Also, these landlords must provide tenants with a new battery for each smoke detector at the beginning of each lease and annually thereafter. It is the responsibility of the tenant to do monthly testing and to notify the landlord in writing any problems with smoke detectors.

## **Senate Bill 1395**

*An Act Clarifying the Enforcement Provisions In Relation to Fire Prevention*

Senator Dianne Wilkerson

This legislation eliminates local provisions dealing with one or two family homes, thereby requiring all of these dwellings to be equipped with smoke detectors. Any person who disconnects, removes, destroys or allows a smoke detector to be shut off shall be punished by imprisonment of not more than one year and/ or a fine of not more than \$1,000.

## **House Bill 2279 - Redraft**

*An Act to Require Licensed Day Care Providers to be Registered with Local Fire Departments*

Representative Edward G. Connolly

This legislation mandates that all licensing authorities for day care providers and licensed day care providers shall notify their local fire department upon licensing to be recognized in the fire department's computer system in the event of a fire or crisis at the day care providers site.

## **House Bill 972 & Senate Bill 1345 - Redraft**

*An Act Relative to Dangerous Buildings*

Representative John Binienda & Senator Richard T. Moore

This legislation mandates that an owner, lessee, or mortgagee in possession of any multiple dwelling of 10 or more units or an occupancy of 50 or more, or the owner, lessee, or mortgagee of an unused, uninhabited, or abandoned building to submit a floor plan to such buildings to chiefs of the fire and police departments of the city or town. Also owners, lessees, or mortgagees of unused or abandoned buildings and structures must follow mandatory guidelines such as; annual inspections of unsafe buildings and structures, certified mail must be used to notify the individual responsible for the building that the building either needs to be removed, or made safe; the owner must pay cost of inspections and is permitted 3 days to make the structure safe or secure; requiring local officials to submit reports of survey by certified mail to owner within three days after completion of the survey; requiring the local inspectors to enter the structure/property at once to secure it, make it safe or to remove it if the owner persists in refusing to comply with regulations; the increase of fine from \$100 to \$750 per day for each day the owner fails to repay costs, along with that any owner, lessee, or mortgagee in possession of an abandoned and or unsafe building who fails to take action to make the structure safe or secure within a reasonable time shall be guilty of negligent maintenance if death or serious bodily injury occurs as a result of the dangerous or unsecured condition of the building; lastly the penalty for anyone found guilty of negligent maintenance shall be punished by imprisonment of not more than one year in the house of correction.

## Introduction

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As a legislative body, the Joint Committee on Public Safety (and by extension, the Subcommittee on Fire Safety) is charged with the research and development of legislative and budgetary recommendations that attempt to pragmatically change the status quo in the field of public safety. Under the direction of Chairman Timothy J. Toomey, Jr. (D – Cambridge) and Chairman Jarrett T. Barrios (D – Cambridge) legislation, reports, recommendations and studies from the committee are geared to address salient problems both inside and outside government agencies.

On March 13<sup>th</sup> 2003, in the aftermath of The Station Nightclub Fire in West Warwick, Rhode Island, the Joint Committee on Public Safety held a regularly scheduled hearing on fire safety legislation. Immediately following testimony the committee called an emergency Executive Session to form a Subcommittee on Fire Safety, chaired by Senator Stephen M. Brewer (D - Barre), Representative Robert J. Nyman (D – Hanover) and Representative Kathi-Anne Reinstein (D – Revere).

The formation of this subcommittee was unique in its inception. The members of the Joint Committee on Public Safety were the first public officials in the Massachusetts who charged that the current state of fire regulations and fire prevention in the Commonwealth was inadequate. The subcommittee also became the first public body to seek corrective action in order to prevent catastrophes such as the fire in West Warwick from occurring in Massachusetts.

The co-chairs then took their charge to national, state and local fire officials and citizens of the Commonwealth in order to collect as much information as possible on the regulatory needs of fire safety organizations. The subcommittee held public hearings around the state, including hearings in Boston, Revere, Rockland and Hyannis.

This report is the result of these hearings and the tireless efforts of subcommittee members and staff to reach an equitable level of regulation that preserves the safety of the Commonwealth's citizens, while also safeguarding the privilege of doing business in our state.



# Findings & Recommendations

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*The Subcommittee on Fire Safety and the Joint Committee on Public Safety endorse the following recommendations and suggest that they be adopted by the General Court of the Commonwealth to improve fire safety and prevention state-wide.*

## **I. Staffing Levels, Education and Training of Fire Safety Personnel**

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### *Staffing*

Fire safety and fire prevention in the Commonwealth cannot exist without properly staffed and trained municipal fire departments. Fire Fighters lost due to attrition, retirement or administrative restructuring are frequently seeing their positions not being refilled once they have left. Layoffs and budget shortfalls engender a similar staff deficiency at fire stations across the Commonwealth – a dangerous situation for the citizens of Massachusetts that the subcommittee realizes and hopes to resolve.

Understanding that the recent economic situation exposes all levels of state government to layoffs and cutbacks, the subcommittee nevertheless recommends funding a state wide initiative to bolster fire services' effectiveness with annual equipment and training grants. The need for fire safety personnel and operative fire equipment is the most distressing finding of the subcommittee's research, and subsequently is the cornerstone of all corrective action the subcommittee advocates within this report.

Unfortunately, due to administrative cutbacks and layoffs in that past year, many fire departments are significantly understaffed and lack the personnel to operate their equipment. Testimony submitted to the subcommittee revolved specifically around the question of why staffing must suffer when the most prominent and important function of government since the September 11<sup>th</sup> attacks is public safety. Fire departments feel that they are unnecessarily being targeted for layoffs without due consideration to the ill-effect staff shortages will have on fire response time, fire company effectiveness and the safety of fire fighters.

According to the Fire Chiefs Association of Massachusetts, since the beginning of 2003, 216 firefighters have been laid-off, while another 226 firefighters have been lost due to attrition or retirement (as of September 8<sup>th</sup> 2003). Thus, the total number of firefighters lost in Massachusetts has reached 442 – a number anticipated to climb given the bleak outlook for the next fiscal year.

The loss of fire safety personnel (especially of this magnitude throughout the state) puts everyone in danger. When fire stations close, shifts are curtailed or pink slips distributed, the impact on public safety is enormous.

Closing a fire station protracts response time to calls and allows further danger to manifest. Fire companies may also be required to arrive at a fire without adequate numbers because many communities are not filling the positions given up by retiring fire fighters or losses from attrition. When fewer fire fighters are able to show up at a scene, the greater the burdens are on the other members of the fire company.

In the past, when fire fighters responded to an incident, there were typically enough personnel behind them to help control the blaze and mitigate risk. Now however, with limited staff able to respond, fire fighters must assume the responsibilities of one or two more fire fighters on top of their own - thus further endangering their own lives in order to compensate for the lack of staff.

Protecting the public from fire is not an easy job, nor should one expect that a fire fighter can easily compensate for the loss of another. Given the hazardous job fire fighters perform, such an assumption would be hubris. Consequently, the question the subcommittee faced was how the state can compensate for the loss of fire fighters without (1) financing salaries for new fire fighters (a virtual "budget buster" in the area of hundreds of millions of dollars); (2) further closing fire stations; and (3) maintaining an adequate- to-above average level of fire protection.

The solution is multifaceted.

To begin with, the subcommittee's research uncovered a tool that has been employed by state government that has successfully eased the impact of staffing cuts on municipal fire departments. A competitive or population-based grant program, awarded to every fire department in the state for equipment purchases presented itself as one of the most conspicuous remedies.

In fact, the Joint Committee on Public Safety has a distinguished history of advocating on behalf of fire equipment grants and recently (Chapter 202 of the Acts of 2002) every fire department in the state received a minimum award of \$13,000 under a \$10 million Firefighting Equipment Grant Program. The money these municipal fire departments received was used for a thermal imaging camera or other needed equipment, and additional money was dispersed based on a population formula. Most importantly, every fire department and fire district in the Commonwealth applied and received grants to purchase equipment such as turnout gear, hand-held power lights, communication devices, telephones, personal alert safety systems, air packs, tanks, compressors, thermal imaging devices and computerized personnel accountability systems provided.

Additionally, the Joint Committee on Public Safety has taken a leading role in supplementing the efforts of local fire departments for further grant program opportunities. Just last year, a grant program for police and fire safety needs was written into law under Chapter 245 of the Acts of 2002. Just over \$9.5m was awarded to 359 community fire departments with a minimum of \$15,000 given under the direction of the Executive Office of Public Safety. This funding was used for upgrading equipment and enhancing fire response, distributed on the basis of population, and akin to the program administered the year before.

The subcommittee advocates a reauthorization of these efforts and has produced recommendations that couple the concept of the above grants with the concept of the annually awarded Community Policing Grants.

Distributed every year by the Executive Office of Public Safety to municipal police departments, Community Policing Grants greatly improve the relationships that police officers have with their communities. Funding has been used by communities to upgrade defunct police equipment, supplement D.A.R.E. programs and drug education, contribute to community outreach efforts and improve police officer response time. This grant program has been successful for over ten years in Massachusetts and is lauded by police chiefs and law enforcement officials around the state as a strong supplement to some typically cash-strapped municipalities.



Given this success, the subcommittee has drafted a grant application process very similar to the example set by the Community Policing Grants (details are included below). The subcommittee strongly feels that Massachusetts can compensate for the loss of its fire fighters by improving access to quality resources for current fire fighters. Fire departments must also have the opportunity to improve equipment and update apparatus within their stations if they are to be effective during both good fiscal times and bad.

Secondly, improving access to information about existing structures and creating public awareness of the risks of fire is of critical importance during a time when fire departments are enduring staff shortages. With adequate information on how buildings are constructed as well as information on the occupancy of certain buildings, fire departments can determine the best response to an emergency *even before arriving on the scene* and therefore save lives with limited staff. With an educated public and proactive measures to ensure that one and two family dwellings are equipped with smoke detectors, the state indirectly assures the safety of short-handed fire companies (see recommendations below).

Unfortunately, despite the best efforts of the legislature to upgrade fire safety needs in municipalities, the sad truth is that no entity can control the uncertainty of the economy. Admittedly, fire departments cannot use the equipment coming in the front door if staff is slowly being let out of the back (sometimes never to return). Therefore the subcommittee urges the U.S. House of Representatives and the U.S. Senate to approve the expansion of the U.S. Fire Administration's grant programs, as proposed in *S. 544 - A Bill to Establish a SAFER Firefighter Grant Program*, co-sponsored by Sen. Edward M. Kennedy and Sen. John F. Kerry. This legislation amends the Federal Fire Prevention and Control Act of 1974 to require the establishment of an office within the United States Fire Administration to administer the Staffing for Adequate Fire and Emergency Response (SAFER) Firefighter grant program. The subcommittee feels that this legislation will significantly improve Massachusetts' fire departments ability to hire additional personnel and contribute a supplementary salary-funding mechanism to ease fiscal burdens on local cities and towns.

Adopting such measures in tough fiscal times will be difficult; however the subcommittee feels strongly that fire safety in the Commonwealth is directly dependent upon the quality of its fire prevention infrastructure and the state's willingness to make this policy area a top priority. Approval of the recommended legislative initiatives will understandably take time, but after months of careful research and consultation with fire safety experts, these recommendations have become the ideal way for Massachusetts to proactively pursue safe staffing methods for municipal fire departments.

## Recommendations:

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*The subcommittee believes that the need for fire safety equipment is vital to the well-being of Commonwealth's citizens and its fire fighters. Therefore, the following recommendations out to be adopted:*

- 1). The General Court should approve a method to distribute funding for fire safety equipment via a population-based grant process. Fire Departments should be allowed to select from a “menu” of equipment items that they need in order to effectively upgrade those items they are lacking or those that have fallen into disrepair. Grant awards may also be used in the same vein as Community Policing Grants, however, the subcommittee recommends that on 50% of any funding should be allocated to supplement staff positions (see appendices for prior grant award distribution).
- 2). The General Court should approve the following legislative initiatives, recommended favorably by the Joint Committee on Public Safety:

### **House Bill 599**

*An Act Relative to Providing Fire Fighters with Information Concerning Truss Constructed Buildings*  
Representative Thomas Kennedy

### **House Bill 1733**

*An Act to Build and Renovate Fire and Police Stations in the Commonwealth*  
Representative Timothy J. Toomey, Jr.

### **House Bill 3027**

*An Act Relative to Smoke Detectors*  
Representative John Fresolo

### **House Bill 3391**

*An Act Relative to Smoke Detector Responsibility Clarification*  
Representative Elizabeth Malia

### **Senate Bill 1395**

*An Act Clarifying the Enforcement Provisions In Relation to Fire Prevention*  
Senator Dianne Wilkerson

### **House Bill 2279 - Redraft**

*An Act to Require Licensed Day Care Providers to be Registered with Local Fire Departments*  
Representative Edward G. Connolly

### **House Bill 972 & Senate Bill 1345 - Redraft**

*An Act Relative to Dangerous Buildings*  
Representative John Binienda & Senator Richard T. Moore

- 3). The General Court should officially endorse S. 544 - *A Bill to Establish a SAFER Firefighter Grant Program*, co-sponsored by Sen. Edward M. Kennedy and Sen. John F. Kerry, and urge the U.S. Senate to pass such needed legislation.



## *Education & Training of Fire Safety Personnel*

Several factors contributed to the Station Nightclub fire on February 20<sup>th</sup> 2003; from the use of highly combustible foam plastic soundproofing to reduced visibility of marked emergency exits. Unfortunately, many of these hazards could have been prevented if fire code regulations were taken seriously and strictly enforced.

In Massachusetts, a lack of consistent fire and building inspections, as well as a reliable stream of revenue to fund training for and execution of such inspections, tacitly contribute to hazardous environments in places of public assembly. Without regular inspections, fire hazards persist untreated. The subcommittee feels that this area of public safety is critically important in preventing future tragedies from occurring.

By establishing regular training and certification of municipal fire inspectors, educated professionals can monitor the safety of residential and commercial areas with acumen and accountability. Giving municipalities the flexibility to collect fees for fire inspections, the Commonwealth can establish a self-funding mechanism for fire code enforcement.

Thus with each inspection that is completed, the administration of future fire inspections in that community is bolstered. Fire inspection fees should be collected and judiciously reserved in the General Fund in an effort to maintain a “cycle of re-investment” in fire code enforcement.

Furthermore, the subcommittee feels strongly that no bar, nightclub, dancehall or discotheque should be allowed to conduct business in Massachusetts without the required level of fire safety. This means that simply obtaining a liquor license in the state of Massachusetts does not entitle a business owner to maintain an establishment. On the contrary, such a business must make certain that patrons are entering a building that meets or exceeds the requirements of relevant fire safety law.

Accordingly, the subcommittee feels there is an inherent need for sharing responsibility – the Commonwealth must do its part to ensure fire inspectors are educated and properly executing their duties and in turn, business must do their part to ensure the safety of their customers.

This is not an unreasonable request.

The subcommittee therefore endorses the idea of designating a position of Crowd Manager in bars, nightclubs, dancehalls and discotheques with occupancies of 50 or more. This person, employed by the business owner, assumes responsibility for checking the operational condition of all exits, fire extinguishers egress routes and other fire-related systems and methods throughout the building. The Crowd Manager will then have a mandatory check list to fill out, indicating that each fire safety requirement has been met and checked prior to the start of business each day. Training personnel for this position should be a condition of obtaining a Certificate of Inspection or liquor license, it should be easily executed and made available to a wide-range of employees. Police officers assigned to entertainment venue details should also be familiar with the checklist as an additional precaution.

Lastly, fire and building inspectors should be empowered to ticket and fine code violators with a standardized “code citation book” much like traffic tickets. Currently, the code enforcement

process is time-consuming and laborious. If a violation is cited, enforcement officials must first apply for criminal complaints and then appear at a clerk magistrate's hearing to determine if the complaint should be issued. If the complaint is then issued, inspectors must appear at the trial – where many are frequently rescheduled, often numerous times. This is an unnecessarily arduous process – occurring while the violator may continue to conduct business and patrons are unwittingly subject to occupying an unsafe building. The status quo is discouraging at best.

However, under this proposal, any building owner or operator that receives such a “code citation ticket” would be immediately fined for the violation, compelled to correct it within a reasonable time and face additional charges if the violation is not remedied. An appeals process would be in place should the building owner or operator feel that they are aggrieved by the citation.

The goal in issuing these citations is not punitive, but corrective. Massachusetts can no longer afford code violations to be lost in the stream of judicial proceedings while patrons occupy unsafe structures. If the force of law is not behind fire safety regulations, then it is ultimately difficult to justify the existence of such regulations. The subcommittee feels that Commonwealth has a unique opportunity to immediately correct such a glaring problem in code enforcement that has the potential to endanger more lives if left unchanged.

## **Recommendations:**

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*The subcommittee proposes that the following recommendations out to be adopted:*

- 1). The Executive Office of Public Safety and related agencies should develop and administer a training program to educate and certify all municipal fire and building inspectors. Training should focus specifically on certifying fire and building safety inspectors as well as training said inspectors in the enforcement of code regulations. Furthermore, a program for re-certification of code enforcement officials should be developed, whereas inspectors' licenses shall be contingent upon re-certification every three years. Legislation should include funding to the Executive Office of Public Safety on the order of \$400,000 - \$500,000 for implementation of this proposal.
- 2). The General Court should enact legislation empowering fire and building inspectors to ticket and fine code violators with a standardized “code citation book”. Such legislation should require a fair and equitable appeals process, where violators can have reasonable means of recourse should they find themselves aggrieved. Code enforcement officials should have the option of fining a violator or giving a written warning. Furthermore, any violation should carry a 30-60 day mandatory compliance schedule to be determined at the time of the violation by the code enforcement official.
- 3). The General Court should enact legislation establishing funding for municipalities for fire and building code inspections. The Alcoholic Beverages Control Commission should consider increasing liquor license application fees with the revenue from such fees being distributed to the municipality wherein the license would be utilized. This money would then be retained by the municipality for code and inspection enforcement. In addition, all the proceeds from “code enforcement tickets” would also be re-directed to the municipality where the violation occurred for the same purpose. This means that not only will fire inspections occur more frequently in this state, but they will also become essential to operating a business in Massachusetts.



- 4). The General Court should enact legislation requiring each municipal fire department to have a minimum of one trained and certified fire inspector. Understanding that not all municipal budgets may permit this circumstance, legislation should be geared to allow smaller municipalities an extended period of time for implementation or allow the use of “dual roles” – for example, the municipal building inspector or a part-time fire fighter could also act as the municipal fire inspector (only after proper certification and training).
- 5). The Executive Office of Public Safety and related agencies should develop a comprehensive training program for bars, nightclubs, dancehalls and discotheques that would establish the position of Crowd Manager in all such businesses with an occupancy of 50 or more. A fire and building safety checklist would be required to be maintained for every day of business. Failure to comply with the training provision would result in prosecution of a code violation and would ultimately be a prerequisite for the maintenance of a liquor license. Similar training should also be offered to police personnel who are assigned to entertainment venue details and such requirements should not compel business owners, operators or local police departments to hire new personnel in order to implement such training for employees.
- 6). The Board of Building Regulations and Standards as well as the Board of Fire Prevention Regulations should immediately devise methods of written notification that non-profit and fraternal organization can distribute to performing groups that inform said groups of the fire-code restrictions for that structure. Many organizations have expressed concern that performing groups, if they were to cause a fire, would not be responsible for the damage they have done, despite the best efforts of the organization to inform them. These organizations have requested documentation both legitimizing their right to restrict certain performance displays as well as lawfully instructing those performers to conform to fire codes.
- 7). One of the most effective ways to prevent tragedies like The Station nightclub fire is to educate the public of the risks endemic to fire. The Executive Office of Public Safety should develop a state-wide public education campaign that should include attention getting public service announcements for entertainment venues. The subcommittee also recommends the re-authorization of the SAFE Program, recently cut from the Commonwealth’s budget. The Student Awareness of Fire Education (S.A.F.E.) Program is a state initiative to provide resources to local fire departments to conduct fire and life safety education programs in grades K-12. This program enables students to recognize the dangers of fire and more specifically the fire hazards tobacco products pose. Fire safety must start at a very young age and the subcommittee unanimously supports such an initiative.

## II. Automatic Sprinklers, Fire Extinguishers and Pyrotechnic Displays

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### *Automatic Sprinklers*

Sprinkler systems are one of the most important fire safety devices that business owners can employ. In its research, the subcommittee discovered that there are no recorded instances of multiple deaths in buildings with automatic sprinklers. Not only is the intensity of fires greatly reduced (if not extinguished) by the use of sprinkler systems, but the National Fire Protection Association indicates that sprinklers typically reduce the chances of fire-related death and average property loss by one-half to two-thirds *in any kind of property* where they are used<sup>1</sup>. This is a statistic that the subcommittee takes very seriously.

Moreover, there is less economic loss in a building fire contained by automatic sprinklers (as repairs can be made much quicker) and businesses can resume operation much faster. Subsequently, fewer jobs are lost and insurance costs are reduced. The installation and use of sprinklers also protects the safety of fire service personnel and assists in putting fire units back in service quickly and available for other calls.

The Committee on Public Safety took immediate action during the emergency executive session on March 13<sup>th</sup> 2003 to report favorably House Bill 3726, the Harkins/Balser Bill. This legislation requires that all buildings with 7500 square feet (in the aggregate) to install automatic sprinklers, as well as banning all pyrotechnic displays in dancehalls and nightclubs in the Commonwealth. The Joint Committee on Public Safety and the Subcommittee on Fire Safety unanimously endorse this legislation.

The way the current law is constructed, any addition under 7500 square feet is exempt from the automatic sprinkler law. This allows a person to keep adding square feet to a building via separate projects over a period of years without ever adding a sprinkler system, even though the total square feet of the building is well over the 7500 square foot threshold. H.3726 amends the current law so that any building over 7500 square feet, or addition that then creates a structure that is over 7500 square feet, would have to have an automatic sprinkler system installed.

The subcommittee also recommends that the Commonwealth adopt sprinkler requirements stronger than those recommended by the National Fire Protection Association. Automatic sprinkler systems should be installed in all nightclubs, discotheques, dance halls and bars with more than a 50-person occupancy within three years.

The legislation also directs the fire marshal and the board of fire prevention regulations to make rules and regulations banning pyrotechnic displays in dancehalls and nightclubs; and to also conduct an investigation into and make recommendations for requiring automatic sprinklers in dancehalls and nightclubs.

Recognizing that the installation of sprinkler systems will be costly to smaller business owners, the subcommittee therefore endorses an accelerated tax depreciation deduction for installation of such sprinklers as a retrofit in existing nightclubs, bars, dancehalls and discotheques. The subcommittee feels that while safety should be a paramount consideration of all public assembly



areas, the cost of doing safe business in the Commonwealth should not be unreasonable or prohibitive.

## Recommendations:

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*The subcommittee proposes that the following recommendations out to be adopted:*

- 1). The General Court should enact **House Bill 3726**, *An Act Relative to Sprinkler Systems and Improving Fire Safety* – the Harkins/Balser Bill – currently before the House of Representatives.
- 2). The General Court should enact legislation that requires all places of public assembly (under Use Group A-2 in the Massachusetts State Building Code) with more than a 50-person occupancy install automatic sprinklers within three years. Such legislation should also make efforts to reduce the burden on small businesses by incorporating an accelerated tax depreciation deduction for installation of such sprinklers as a retrofit in existing nightclubs, bars, dancehalls and discotheques.
- 3). Both the Executive Office of Public Safety and The Executive Office of Economic Affairs (along with their attendant agencies) should further research methods by which business owners can install automatic sprinklers at discounted rates. Preliminary ideas to explore include no-interest and low-interest loans to qualified business owners as well as insurance cost containment measures where reduced premiums may be applicable.
- 4). The General Court should officially endorse *H.R. 1824 – The Fire Sprinkler Incentive Act of 2003*, co-sponsored by Congressmen Barney Frank, Congressman Edward J. Markey and Congressman James P. McGovern. This bill amends the Internal Revenue Code of 1986 to classify automatic sprinkler systems as 5-year property for purposes of depreciation. The subcommittee agrees that under the present straight-line method of depreciation, there is a disincentive for building safety improvements due to an extremely low rate of return on investment and therefore fully supports the incentives this bill is trying to create. This bill is currently before the U.S. House of Representatives' Committee on Ways & Means".

## *Fire Extinguishers*

While it is evident that the fire which engulfed The Station nightclub would have been greatly mitigated (even prevented) if an automatic sprinkler system was present, the subcommittee found that simply installing such a sprinkler system does not guarantee that the risks of property damage and loss of life are therefore absent.

To the contrary, significant property damage and the dangers of smoke inhalation (which is the leading cause of death among fire victims) occur prior to the activation of sprinklers. The installation of automatic sprinklers does not satisfy the level of safety that should be maintained especially in such close quarters as bars, nightclubs, dancehalls or discotheques.

Already required under the Massachusetts State Building Code in these venues, portable fire extinguishers are a first line of defense against fires of varying size and degree". Each place of public assembly should be checking the condition, operational behavior and amount of propellant liquid inside of these fire extinguishers on a regular basis.

However, this is not typically the case. As part of its research, the subcommittee determined that several places of public assembly as well as structures in larger Use Groups frequently disregard the value of fire extinguishers. Testimony from fire inspectors, fire fighters and fire equipment manufacturers focused on the lack of recurrent safety verification procedures for fire extinguishers in Massachusetts. Many of these groups expressed anxiety that too much attention on automatic sprinkler systems by the media and state governments overshadow the need and the effectiveness of fire extinguishers as fire prevention tools.

The subcommittee believes that this should change. Fire prevention is a multi-dimensional affair. As public figures, community leaders (including local, state and national elected officials) and members of the media should promote the equitable use of all fire prevention methods and (when possible) not focus solely on the “issue of the day” – automatic sprinklers seemingly the most recent. Education in all forms of fire safety will only improve if one prevention issue does not eclipse the efficacy of another.

### **Recommendations:**

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*The subcommittee proposes that the following recommendations out to be adopted:*

- 1). The Executive Office of Public Safety and related agencies should develop requirements that all personnel hired in dancehalls and nightclubs should be properly trained in the use of fire extinguishers and that those fire extinguishers be regularly inspected by the designated “Crowd Manager” employed by the dancehall or nightclub (detailed above).
- 2). The Board of Fire Prevention Regulations should promote and educate owners or operators of all buildings in the proper usage and storage of fire extinguishers. Such an education program should include regular inspections of fire extinguishers as well as replacement and disposal procedures for old or outdated fire extinguishers. The Board should also research technologies that automate fire extinguisher inspection in larger structures.
- 3). The General Court should enact legislation empowering fire and building inspectors to ticket and fine violators under the “code citation book” (detailed above) for failure to maintain, re-fill or possess fire extinguishers in any building mandated to do so. Currently, only nursing homes, schools, school dormitories and newly constructed (larger) buildings are subject to regular inspection for fire extinguisher compliance. The current fine for a violation is \$50 per day for everyday the violation is not corrected. The subcommittee feels that by utilizing the “code violation ticket” approach, fire extinguisher regulations will be regularly observed and further recommends the punishment for a violation be expanded to \$75 per day for each day the violation remains uncorrected.

### *Pyrotechnic Displays*

While pyrotechnics are widely recognized as an inherent part of modern entertainment, access to such volatile technology should be severely restricted.

As part of the Harkins/Balser Bill (H. 3726), the Joint Committee on Public Safety and the Subcommittee on Fire Safety advocate for the ban of all pyrotechnic displays in bars, dancehalls,



nightclubs and discotheques in the Commonwealth. However, the subcommittee believes this ban should not extend to larger entertainment venues that where automatic sprinkler systems are installed. Venues such as the Wang Center, Colonial Theater, the Fleet Center and The Centrum Centre should be exempt from such a requirement.

Nevertheless, use of such pyrotechnic displays *in any venue* should be strictly regulated. Testimony collected for this report showed overwhelmingly that owners and operators of public assembly buildings, if made aware of regulations for use of pyrotechnics in their venues, would certainly comply with such requirements. Many of these venues rely on the attractiveness and marvel of pyrotechnics to appeal to patrons and would, if compelled, abide by regulations in order to maintain their customer base.

Therefore the subcommittee believes that pyrotechnic regulations are both a boon for safety and unproblematic for larger-venue business owners.

### Recommendations:

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*The subcommittee proposes that the following recommendations out to be adopted:*

- 1). The General Court should enact **House Bill 3726**, *An Act Relative to Sprinkler Systems and Improving Fire Safety* – the Harkins/Balser Bill – currently before the House of Representatives and adopt the ban on all pyrotechnic displays in bars, dancehalls, nightclubs and discotheques.
- 2). The Board of Fire Prevention Regulations should require that the owner, operator or manager of larger entertainment venues (including theatres) to sign a written statement confirming their awareness that a pyrotechnic display is in use for each performance that utilizes such displays. The statement shall be forwarded to the fire chief of the city or town where the venue resides.
- 3). The Board of Fire Prevention Regulations should require the signature of the local Fire Chief and the local Fire Inspector on all permits for indoor pyrotechnic displays. Furthermore, the Fire Chief or the Fire Inspector should, at their discretion, be permitted to inspect such pyrotechnic displays at anytime prior to, during or after a performance.
- 4). The Board of Fire Prevention Regulations should study ways to improve tracking and recording pyrotechnic materials in Massachusetts, as well as improving ways to store said materials. Importing and exporting pyrotechnic equipment often sufficient oversight and the Board of Fire Prevention Regulations should work in conjunction with local, state and federal officials to promulgate better tracking and notification of pyrotechnic materials entering Massachusetts.
- 5). The Board of Fire Prevention Regulations should extend the apprenticeship period for a pyrotechnics license from 2 years (currently) to 4 years.
- 6). The Board of Fire Prevention Regulations should study and promulgate regulations that regulate the use of fog/haze machines in places of public assembly. Such machines cut visibility in small venues and have the potential to further endanger patrons should an emergency situation arise.

### III. Occupancy and Egress

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Three days prior to the fire in West Warwick, twenty-one people died and over 50 were injured at the E2 Nightclub in Chicago, IL, after a guard sprayed mace into the crowd in an attempt to break up a fight. In the ensuing chaos, club patrons trying to exit the building found emergency exits locked and were soon trampled by others attempting to exit. Witnesses described a horrific stampede as people fell in stairwells and the front lobby. The dead and injured began to pile on top of one another and the melee was made worse because the glass front doors were shut because of the pressure of the rushing crowd<sup>iv</sup>.

Dangers in places of public assembly are not always as evident as the quickly spreading fire that consumed The Station nightclub. Indeed, various other factors besides fire can cause injury or death to occupants if building and fire codes are not strictly adhered to (as evidenced in Chicago). Local fire inspectors set occupancy rates at reasonable levels in order to ensure safe escape should a fire occur and with due consideration of business owners' objectives to maximize revenue.

The subcommittee assumed responsibility to make recommendations that struck a balance between these sometimes-competing desires.

Strict enforcement of occupancy limits and adding violations of such limitations should be increased under the proposed "code citation book". Furthermore, those who consistently violate occupancy limits (so-called "repeat offenders") should temporarily be suspended from doing business for 30 days. Fire inspectors should be empowered to utilize their position in order to safeguard any means of escape from becoming a curse, rather than a blessing.

Currently, the Massachusetts State Building Code requires that multiple means of egress be available to patrons occupying dancehalls, nightclubs, bars and discotheques. While the subcommittee understands that approved methods of egress are constructed prior to obtaining the approval of a building inspector, it is also true that many of these means of egress periodically (or permanently) become obstructed.

Egress routes in several locations are ill marked, lack markings entirely or are obstructed by dim lighting, concealing paint, mistreatment or deficient preservation of exit indicators. This is a serious violation of state building codes and one that endangers the lives of every occupant. The subcommittee researched ways to improve egress where recommendations include widening main exit doors, studying ways to improve lighting and exit indicators as well as charging buildings of Use Group A-2 with maintaining daily inspection records of clear egress areas.

The subcommittee heard testimony from several officials concerned that even if egress routes are clearly marked and unobstructed, patrons are infrequently aware of the location of such routes. Worse, if there were a fire or other emergency where vision becomes obstructed (by smoke or chemicals), the difficulty of escape would be significantly multiplied. This concern becomes especially poignant when one realizes that this situation is likely even when a venue owner has met all the regulations for egress within the State Building Code.

In light of this, the subcommittee has researched several new and unique methods of improving discernment of egress routes. Some of the easier solutions to implement are public



announcements of egress routes in high-occupancy venues, such as theatres and arenas. Should an emergency occur, novel solutions such as cutting the sound output and raising the house lights to quickly communicate an emergency situation are also currently being developed. Technology such as this should be assiduously pursued if economically viable.

In addition, a quick search of some of the leading companies in the fire safety industry show that many businesses are also developing innovative and inexpensive means to light exits ways or routes to exit ways. In particular, some companies have developed lighting that can be installed along the base boards of walls that can direct a person in danger to the nearest exit. While this technology is fairly new, the subcommittee recognizes that it has the potential to save a great many lives and recommends further research into employing this tool.

## **Recommendations:**

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*The subcommittee proposes that the following recommendations out to be adopted:*

- 1). The General Court should enact legislation that increases the penalty for blocked, ill-marked or ill-maintained egress routes. As further incentive to keep these routes in compliance with code regulations, code enforcement personnel should be empowered to cite such violations in the proposed “code citation book”. Checking means of egress should be included in any building and safety checklist for areas of public assembly (detailed previously).
- 2). The Board of Building Regulations and Standards as well as the Board of Fire Prevention Regulations should study methods of improving the awareness and luminescence of exit ways. Such methods should include (but not be limited to) low-level lighting or luminescent markings for exits doors, outlining base boards or door frames with luminescent markings, distinctive exit sign lighting and scheduled testing and maintenance of exit signs and lights. Research should also include ways of cutting sound output and raising house lights should an emergency occur in theatres, arenas and larger entertainment venues.
- 3). The Board of Building Regulations and Standards as well as the Board of Fire Prevention Regulations should study methods of widening main exit doors for areas of public assembly. Exits and main exits should be examined or upgraded in order to accommodate a building’s maximum occupancy load and the Board’s should research initiative to decrease the burden on businesses, should they need to retrofit doors or exit ways.

## **IV. Building Materials**

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Fire is indifferent to the value of life and property. Quickly spreading conflagrations need to somehow be prevented in order to save lives and preserve the structural integrity of buildings

The ability to escape a fire depends greatly on the power to alert occupants of impending danger. Accurate early warning, utilizing tools such as smoke, heat, flame and gas-detectors, is one of the most successful tools one can employ in hopes of evading disaster.

Currently, battery powered or “hard wired” smoke detectors are required by the Massachusetts State Building Code. These devices should be placed in all sleeping areas and in places



adjacent to sleeping areas. Such requirements aid in notifying occupants of fire, permit timely and orderly evacuation and decrease the potential for injury and death.

Fire extinguishers and automatic sprinkler systems, as mentioned previously, are then the next level of protection available to occupants. A person may use the fire extinguisher, if the fire is isolated or not out of control, to extinguish the blaze before any serious risk to life or property becomes apparent.

However, if the fire is spreading quickly, it is important to note that a fire extinguisher can also be utilized to suppress a fire long enough to create an escape route.

Should a conflagration become overwhelming, the last remaining defense against substantial property damage is the integrity of the building materials used in construction of the dwelling. The subcommittee invested a great deal of research in this subject during its deliberations. Many of the findings point to a need for sensible construction methods in specific dwellings in order minimize loss of life and assets.

The subcommittee discovered that the concept of “balanced design” is congruent with the overall goals of fire prevention advocated in this report.

First, automatic detection systems should exist within a dwelling. Second, an overt method of suppression should be present to quell flames. Third, and less apparent, the building materials of a structure should be flame-resistant. The subcommittee researched ways that building materials can be improved in order to create more static preventative measures and mitigate the large loss of property in the event of a fire.

One suggested method is to employ compartmentalization in new construction. Compartmentalization is a passive system that contains fire until it can be brought under control by fire fighters. Compartmentalization limits the extent of fire and fire damage by dividing buildings into fire compartments enclosed by firewalls, fire doors and by fire-rated floors and ceilings. This means that a building, constructed using this method, could contain a fire in very a limited area – effectively “cordoning off” the fire without compromising structural integrity, endangering other occupants or resulting in significant property loss.

Currently, only hospitals, nursing homes, convalescent homes and infirmaries are required to be constructed under the compartmentalization (or Type 1-B) construction approach in Massachusetts<sup>v</sup>. The subcommittee recommendations expand the scope of the Massachusetts Building Code and suggest the use of compartmentalization in new construction for schools, school dormitories, assisted living facilities and respite care facilities. The goal is to protect citizens who lack or whose capability of self-preservation is limited due to underdevelopment or illness. By design, this method also protects fire fighters who respond to these fires by isolating the blaze in an environment whose conditions are better controlled.

Most importantly each of the above essential items contributes to lowering the risk of death and permanent (or irreparable) damage to structures. The first line of defense against fire should always be fire extinguishers and automatic sprinklers. The subcommittee, however, recognizes the importance of protecting our most vulnerable groups with further methods of fire suppression and understands the need for the Commonwealth to preserve its future infrastructure.

## Recommendations:

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*The subcommittee proposes that the following recommendations out to be adopted:*

- 1). The General Court should adopt legislation that requires the use of “balanced design” construction in all future construction or major addition to schools, school dormitories, assisted living facilities and respite care facilities.
- 2). The Board of Fire Prevention Regulations should promulgate rules and regulations that require “balanced design” in the future construction of larger entertainment venues, such as theatres, convention centers and arenas.

## V. Interior Finishes

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The Station nightclub fire brought the issue of flame-resistant acoustic materials to the forefront of fire safety in recent months. Many places of public assembly in Massachusetts who regularly showcase live music utilize such acoustic materials without any objective means of determining whether these materials are fire-resistant, or worse, fire-stimulant. Therefore, the subcommittee advocates a full ban on all foam plastics in bars, nightclubs, dancehalls and discotheques that do not contain sprinklers.

While every effort should be made employ early warning detection systems, fire-control systems and balanced-design construction, a further prevention method should be sought if full fire-suppressant methods are indeed the goal in any structure.

The subcommittee found that older buildings or in places of business, occupants and structures are still vulnerable to fire. Manufacturing errors in wire insulation, or faulty wiring in general, contribute to a great many fires throughout the United States. Even with sprinklers present, many wires are positioned above the sprinkler heads – in so-called “drop ceilings” – and create large fires without tripping suppression equipment.

This is a risk that many citizens in Massachusetts are subject to unwittingly. The subcommittee feels that every effort should be made to investigate the implementation of better fire-rated wire insulation as well as other interior finish materials (such as wall coverings, paneling, insulation and the like).

## Recommendations:

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*The subcommittee proposes that the following recommendations out to be adopted:*

- 1). The Board of Building Regulations and Standards as well as the Board of Fire Prevention Regulations should immediately prohibit the use of all foam plastics in all bars, nightclubs, dancehalls and discotheques that do not contain sprinklers.
- 2). The Board of Fire Prevention Regulations should investigate the safety and efficacy of fire-resistant acoustic materials. The board shall also be charged with investigating the use of foam

plastic materials, the labeling process for these materials, researching current technological developments of foam plastic materials, and incorporating the safe use of such materials into the state building code. The Board of Fire Prevention and Regulations should also engage in educational efforts to promote awareness of the use and misuse of foam plastics.

3). The Board of Fire Prevention Regulations should investigate the use and implementation of fire-rated wires, paneling, insulation and other interior finishes in order to determine the best practices businesses can employ to prevent fires from spreading in areas that are not covered by fire suppression tools.



## FY01 Firefighter Public Safety Equipment Grant Awards

	ESTIMATE	
Town/District	Population	Total
BOSTON	555,447	\$ 263,000.00
BROCKTON	93,173	\$ 109,741.88
CAMBRIDGE	93,352	\$ 109,741.88
FALL RIVER	90,654	\$ 109,741.88
LOWELL	101,075	\$ 109,741.88
NEW BEDFORD	96,353	\$ 109,741.88
SPRINGFIELD	148,144	\$ 109,741.88
WORCESTER	166,535	\$ 109,741.88
BROOKLINE	53,911	\$ 67,741.70
CHICOPEE	54,049	\$ 67,741.70
FRAMINGHAM	64,646	\$ 67,741.70
HAVERHILL	55,321	\$ 67,741.70
LAWRENCE	69,420	\$ 67,741.70
LYNN	81,075	\$ 67,741.70
MALDEN	52,644	\$ 67,741.70
MEDFORD	55,981	\$ 67,741.70
NEWTON	80,345	\$ 67,741.70
QUINCY	85,752	\$ 67,741.70
SOMERVILLE	74,100	\$ 67,741.70
TAUNTON	52,553	\$ 67,741.70
WALTHAM	58,540	\$ 67,741.70
WEYMOUTH	54,903	\$ 67,741.70
AMHERST	35,252	\$ 45,721.82
ANDOVER	31,424	\$ 45,721.82
ARLINGTON	43,431	\$ 45,721.82
ATTLEBORO	39,557	\$ 45,721.82
BEVERLY	39,037	\$ 45,721.82
BILLERICA	39,594	\$ 45,721.82
BRAINTREE	34,906	\$ 45,721.82
CHELMSFORD	33,776	\$ 45,721.82
EVERETT	34,922	\$ 45,721.82
FALMOUTH	31,431	\$ 45,721.82
FITCHBURG	40,011	\$ 45,721.82
HOLYOKE	40,964	\$ 45,721.82
LEOMINSTER	40,208	\$ 45,721.82
MARLBOROUGH	33,278	\$ 45,721.82
METHUEN	41,988	\$ 45,721.82
NATICK	31,491	\$ 45,721.82
PEABODY	49,204	\$ 45,721.82
PITTSFIELD	45,513	\$ 45,721.82
PLYMOUTH	49,810	\$ 45,721.82
RANDOLPH	30,567	\$ 45,721.82
REVERE	41,663	\$ 45,721.82
SALEM	38,351	\$ 45,721.82
WATERTOWN	32,435	\$ 45,721.82
WESTFIELD	37,570	\$ 45,721.82
WOBURN	37,070	\$ 45,721.82
ACTON	19,206	\$ 31,281.29

AGAWAM	26,738	\$ 31,281.29
AMESBURY	16,076	\$ 31,281.29
AUBURN	15,580	\$ 31,281.29
<b>Barnstable Center/Oster/MM FD</b>	23,380	\$ 31,281.29
BELLINGHAM	15,864	\$ 31,281.29
BELMONT	23,907	\$ 31,281.29
BOURNE	18,007	\$ 31,281.29
BRIDGEWATER	24,536	\$ 31,281.29
BURLINGTON	23,694	\$ 31,281.29
CANTON	20,677	\$ 31,281.29
CHELSEA	27,426	\$ 31,281.29
CONCORD	17,867	\$ 31,281.29
DANVERS	25,188	\$ 31,281.29
<b>DARTMOUTH #1</b>	18,000	\$ 31,281.29
DEDHAM	23,721	\$ 31,281.29
DRACUT	28,136	\$ 31,281.29
DUXBURY	15,353	\$ 31,281.29
EASTHAMPTON	15,627	\$ 31,281.29
EASTON	21,311	\$ 31,281.29
FAIRHAVEN	15,937	\$ 31,281.29
FOXBOROUGH	16,388	\$ 31,281.29
FRANKLIN	28,353	\$ 31,281.29
GARDNER	20,261	\$ 31,281.29
GLOUCESTER	29,657	\$ 31,281.29
GREENFIELD	18,267	\$ 31,281.29
HINGHAM	20,439	\$ 31,281.29
HOLDEN	15,182	\$ 31,281.29
HUDSON	17,803	\$ 31,281.29
LEXINGTON	29,594	\$ 31,281.29
LUDLOW	18,957	\$ 31,281.29
MANSFIELD	19,244	\$ 31,281.29
MARBLEHEAD	20,103	\$ 31,281.29
MARSHFIELD	23,538	\$ 31,281.29
MELROSE	27,376	\$ 31,281.29
MIDDLEBOROUGH	19,702	\$ 31,281.29
MILFORD	25,586	\$ 31,281.29
MILTON	25,662	\$ 31,281.29
NEEDHAM	27,924	\$ 31,281.29
NEWBURYPORT	16,808	\$ 31,281.29
NORTH ADAMS	15,496	\$ 31,281.29
NORTH ANDOVER	25,065	\$ 31,281.29
NORTH ATTLEBOROU	25,908	\$ 31,281.29
NORTHAMPTON	28,680	\$ 31,281.29
NORTON	16,097	\$ 31,281.29
NORWOOD	28,824	\$ 31,281.29
PEMBROKE	16,621	\$ 31,281.29
READING	23,371	\$ 31,281.29
ROCKLAND	17,730	\$ 31,281.29
SANDWICH	18,746	\$ 31,281.29
SAUGUS	26,576	\$ 31,281.29
SCITUATE	17,577	\$ 31,281.29
SHARON	16,942	\$ 31,281.29
SHREWSBURY	27,791	\$ 31,281.29
SOMERSET	17,710	\$ 31,281.29
SOUTHBRIDGE	17,460	\$ 31,281.29

STONEHAM	22,254	\$ 31,281.29
STOUGHTON	27,664	\$ 31,281.29
SUDBURY	15,550	\$ 31,281.29
SWANSEA	15,554	\$ 31,281.29
TEWKSBURY	29,070	\$ 31,281.29
WAKEFIELD	24,772	\$ 31,281.29
WALPOLE	22,640	\$ 31,281.29
<b>WAREHAM</b>	15,562	\$ 31,281.29
WEBSTER	16,115	\$ 31,281.29
WELLESLEY	26,789	\$ 31,281.29
WEST SPRINGFIELD	25,900	\$ 31,281.29
WESTBOROUGH	15,428	\$ 31,281.29
WESTFORD	19,559	\$ 31,281.29
WILMINGTON	20,593	\$ 31,281.29
WINCHESTER	20,339	\$ 31,281.29
WINTHROP	17,179	\$ 31,281.29
YARMOUTH	22,797	\$ 31,281.29
ABINGTON	14,876	\$ 20,985.69
ACUSHNET	10,111	\$ 20,985.69
ADAMS	8,768	\$ 20,985.69
ASHBURNHAM	5,577	\$ 20,985.69
ASHLAND	13,482	\$ 20,985.69
ATHOL	11,161	\$ 20,985.69
AYER	7,515	\$ 20,985.69
<b>Barnstable Hyannis FD</b>	12,543	\$ 20,985.69
BEDFORD	13,947	\$ 20,985.69
BELCHERTOWN	11,946	\$ 20,985.69
BERKLEY	5,395	\$ 20,985.69
BLACKSTONE	8,386	\$ 20,985.69
BOXFORD	9,041	\$ 20,985.69
BREWSTER	9,637	\$ 20,985.69
CARVER	11,647	\$ 20,985.69
CHARLTON	10,345	\$ 20,985.69
CHATHAM	7,098	\$ 20,985.69
CLINTON	13,053	\$ 20,985.69
COHASSET	7,094	\$ 20,985.69
DALTON	6,854	\$ 20,985.69
<b>DARTMOUTH #2</b>	5,549	\$ 20,985.69
<b>DARTMOUTH #3</b>	8,517	\$ 20,985.69
DENNIS	14,693	\$ 20,985.69
DIGHTON	5,937	\$ 20,985.69
DOUGLAS	6,634	\$ 20,985.69
DOVER	5,481	\$ 20,985.69
DUDLEY	9,802	\$ 20,985.69
EAST BRIDGEWATER	12,584	\$ 20,985.69
EAST LONGMEADOW	13,960	\$ 20,985.69
EASTHAM	5,033	\$ 20,985.69
FREETOWN	8,834	\$ 20,985.69
GEORGETOWN	7,384	\$ 20,985.69
GRAFTON	13,742	\$ 20,985.69
GRANBY	5,865	\$ 20,985.69
GREAT BARRINGTON	7,592	\$ 20,985.69
GROTON	9,205	\$ 20,985.69
GROVELAND	5,841	\$ 20,985.69
HALIFAX	7,163	\$ 20,985.69
HAMILTON	7,545	\$ 20,985.69



HANOVER	13,278	\$ 20,985.69
HANSON	9,742	\$ 20,985.69
HARVARD	12,399	\$ 20,985.69
HARWICH	11,765	\$ 20,985.69
HOLBROOK	11,125	\$ 20,985.69
HOLLISTON	13,576	\$ 20,985.69
HOPEDALE	5,654	\$ 20,985.69
HOPKINTON	11,351	\$ 20,985.69
HULL	10,528	\$ 20,985.69
IPSWICH	12,656	\$ 20,985.69
KINGSTON	10,983	\$ 20,985.69
LAKEVILLE	8,900	\$ 20,985.69
LANCASTER	6,685	\$ 20,985.69
LEE	5,657	\$ 20,985.69
LEICESTER	10,442	\$ 20,985.69
LENOX	5,180	\$ 20,985.69
LINCOLN	7,921	\$ 20,985.69
LITTLETON	7,936	\$ 20,985.69
LONGMEADOW	14,710	\$ 20,985.69
LUNENBURG	9,473	\$ 20,985.69
LYNNFIELD	11,359	\$ 20,985.69
MANCHESTER	5,465	\$ 20,985.69
MARION	5,197	\$ 20,985.69
MASHPEE	9,343	\$ 20,985.69
MATTAPOISETT	6,333	\$ 20,985.69
MAYNARD	10,462	\$ 20,985.69
MEDFIELD	11,726	\$ 20,985.69
MEDWAY	11,738	\$ 20,985.69
MERRIMAC	5,966	\$ 20,985.69
MIDDLETON	6,040	\$ 20,985.69
MILLBURY	12,382	\$ 20,985.69
MILLIS	8,110	\$ 20,985.69
MONSON	8,002	\$ 20,985.69
<b>MONTAGUE Turners Falls</b>	6,238	\$ 20,985.69
NANTUCKET	7,844	\$ 20,985.69
NORFOLK	10,553	\$ 20,985.69
NORTH READING	13,219	\$ 20,985.69
NORTHBOROUGH	13,258	\$ 20,985.69
NORTHBRIDGE	14,036	\$ 20,985.69
NORWELL	9,925	\$ 20,985.69
ORANGE	7,454	\$ 20,985.69
ORLEANS	6,362	\$ 20,985.69
OXFORD	13,318	\$ 20,985.69
<b>Palmer FD</b>	6,000	\$ 20,985.69
PEPPERELL	10,964	\$ 20,985.69
PLAINVILLE	7,354	\$ 20,985.69
RAYNHAM	10,789	\$ 20,985.69
REHOBOTH	9,601	\$ 20,985.69
ROCKPORT	7,644	\$ 20,985.69
ROWLEY	5,343	\$ 20,985.69
RUTLAND	5,459	\$ 20,985.69
SALISBURY	7,238	\$ 20,985.69
SEEKONK	13,339	\$ 20,985.69
SHIRLEY	7,674	\$ 20,985.69
<b>SOUTH HADLEY #1</b>	10,000	\$ 20,985.69
SOUTHBOROUGH	7,798	\$ 20,985.69

SOUTHWICK	8,311	\$	20,985.69
SPENCER	12,432	\$	20,985.69
STERLING	7,154	\$	20,985.69
STOW	5,842	\$	20,985.69
STURBRIDGE	8,057	\$	20,985.69
SUTTON	7,597	\$	20,985.69
SWAMPSCOTT	13,868	\$	20,985.69
TEMPLETON	7,116	\$	20,985.69
TOPSFIELD	6,257	\$	20,985.69
TOWNSEND	9,169	\$	20,985.69
TYNGSBOROUGH	10,296	\$	20,985.69
UPTON	5,524	\$	20,985.69
UXBRIDGE	11,321	\$	20,985.69
WARE	9,727	\$	20,985.69
WAYLAND	12,343	\$	20,985.69
WEST BOYLSTON	6,726	\$	20,985.69
WEST BRIDGEWATER	6,742	\$	20,985.69
WESTMINSTER	6,707	\$	20,985.69
WESTON	10,651	\$	20,985.69
WESTPORT	14,156	\$	20,985.69
WESTWOOD	13,160	\$	20,985.69
WHITMAN	14,229	\$	20,985.69
WILBRAHAM	12,419	\$	20,985.69
WILLIAMSTOWN	7,948	\$	20,985.69
WINCHENDON	9,176	\$	20,985.69
WRENTHAM	10,259	\$	20,985.69
<b>SOUTH HADLEY #2</b>	5,000	\$	20,985.69
ALFORD	407	\$	14,907.23
ASHBY	2,998	\$	14,907.23
ASHFIELD	1,726	\$	14,907.23
AVON	4,618	\$	14,907.23
<b>Barnstable Cotuit FD</b>	3,173	\$	14,907.23
<b>Barnstable FD</b>	3,237	\$	14,907.23
<b>Barnstable W.Barnstable FD</b>	3,237	\$	14,907.23
BARRE	4,901	\$	14,907.23
BECKET	1,501	\$	14,907.23
BERLIN	2,400	\$	14,907.23
BERNARDSTON	2,087	\$	14,907.23
BLANDFORD	1,127	\$	14,907.23
BOLTON	3,352	\$	14,907.23
BOXBOROUGH	4,164	\$	14,907.23
BOYLSTON	3,889	\$	14,907.23
BRIMFIELD	3,133	\$	14,907.23
BROOKFIELD	2,940	\$	14,907.23
BUCKLAND	1,929	\$	14,907.23
CARLISLE	4,760	\$	14,907.23
CHARLEMONT	1,241	\$	14,907.23
CHESHIRE	3,421	\$	14,907.23
CHESTER	1,242	\$	14,907.23
CHESTERFIELD	1,125	\$	14,907.23
CHILMARK	807	\$	14,907.23
CLARKSBURG	1,674	\$	14,907.23
COLRAIN	1,834	\$	14,907.23
CONWAY	1,653	\$	14,907.23
CUMMINGTON	785	\$	14,907.23
DEERFIELD	4,927	\$	14,907.23

DUNSTABLE	2,733	\$ 14,907.23
EAST BROOKFIELD	2,024	\$ 14,907.23
EDGARTOWN	3,682	\$ 14,907.23
EGREMONT	1,226	\$ 14,907.23
ERVING	1,360	\$ 14,907.23
ESSEX	3,407	\$ 14,907.23
FLORIDA	729	\$ 14,907.23
<b>Devens</b>	<b>3,000</b>	\$ 14,907.23
GAY HEAD	250	\$ 14,907.23
GILL	1,584	\$ 14,907.23
GOSHEN	845	\$ 14,907.23
GOSNOLD	97	\$ 14,907.23
GRANVILLE	1,415	\$ 14,907.23
HADLEY	4,443	\$ 14,907.23
HAMPDEN	4,739	\$ 14,907.23
HANCOCK	575	\$ 14,907.23
HARDWICK	2,623	\$ 14,907.23
HATFIELD	3,214	\$ 14,907.23
HAWLEY	324	\$ 14,907.23
HEATH	733	\$ 14,907.23
HINSDALE	1,855	\$ 14,907.23
HOLLAND	2,092	\$ 14,907.23
HUBBARDSTON	3,571	\$ 14,907.23
HUNTINGTON	2,116	\$ 14,907.23
LANESBOROUGH	3,035	\$ 14,907.23
LEVERETT	1,835	\$ 14,907.23
LEYDEN	715	\$ 14,907.23
MENDON	4,739	\$ 14,907.23
MIDDLEFIELD	445	\$ 14,907.23
MILLVILLE	2,526	\$ 14,907.23
MONROE	111	\$ 14,907.23
<b>MONTAGUE</b>	<b>2,078</b>	\$ 14,907.23
MONTEREY	801	\$ 14,907.23
MONTGOMERY	815	\$ 14,907.23
MOUNT WASHINGTON	130	\$ 14,907.23
NAHANT	3,797	\$ 14,907.23
NEW ASHFORD	190	\$ 14,907.23
NEW BRAINTREE	968	\$ 14,907.23
NEW MARLBOROUGH	1,253	\$ 14,907.23
NEW SALEM	819	\$ 14,907.23
<b>NEWBURY FD</b>	<b>3,500</b>	\$ 14,907.23
<b>NEWBURY #2</b>	<b>4,000</b>	\$ 14,907.23
NORTH BROOKFIELD	4,845	\$ 14,907.23
NORTHFIELD	2,939	\$ 14,907.23
OAK BLUFFS	3,267	\$ 14,907.23
OAKHAM	1,678	\$ 14,907.23
OTIS	1,060	\$ 14,907.23
<b>Palmer Bondsville FD</b>	<b>3,000</b>	\$ 14,907.23
<b>Palmer Three Rivers</b>	<b>4,000</b>	\$ 14,907.23
PAXTON	4,188	\$ 14,907.23
PELHAM	1,422	\$ 14,907.23
PERU	757	\$ 14,907.23
PETERSHAM	1,173	\$ 14,907.23
PHILLIPSTON	1,620	\$ 14,907.23
PLAINFIELD	609	\$ 14,907.23
PLYMPTON	2,678	\$ 14,907.23



PRINCETON	3,412	\$ 14,907.23
PROVINCETOWN	3,743	\$ 14,907.23
RICHMOND	1,628	\$ 14,907.23
ROCHESTER	4,548	\$ 14,907.23
ROWE	373	\$ 14,907.23
ROYALSTON	1,224	\$ 14,907.23
RUSSELL	1,607	\$ 14,907.23
SANDISFIELD	654	\$ 14,907.23
SAVOY	693	\$ 14,907.23
SHEFFIELD	2,956	\$ 14,907.23
<b>SHELBURNE Falls</b>	1,012	\$ 14,907.23
<b>SHELBURNE</b>	2,200	\$ 14,907.23
SHERBORN	4,137	\$ 14,907.23
SHUTESBURY	1,701	\$ 14,907.23
SOUTHAMPTON	4,941	\$ 14,907.23
STOCKBRIDGE	2,297	\$ 14,907.23
SUNDERLAND	3,508	\$ 14,907.23
TISBURY	3,475	\$ 14,907.23
TOLLAND	293	\$ 14,907.23
TRURO	1,799	\$ 14,907.23
TYRINGHAM	363	\$ 14,907.23
WALES	1,564	\$ 14,907.23
<b>WAREHAM Onset</b>	4,314	\$ 14,907.23
WARREN	4,560	\$ 14,907.23
WARWICK	764	\$ 14,907.23
WASHINGTON	621	\$ 14,907.23
WELLFLEET	2,777	\$ 14,907.23
WENDELL	956	\$ 14,907.23
WENHAM	4,473	\$ 14,907.23
WEST BROOKFIELD	3,677	\$ 14,907.23
WEST NEWBURY	4,021	\$ 14,907.23
WEST STOCKBRIDGE	1,445	\$ 14,907.23
WEST TISBURY	2,310	\$ 14,907.23
WESTHAMPTON	1,469	\$ 14,907.23
WHATELY	1,452	\$ 14,907.23
WILLIAMSBURG	2,568	<b>\$ 14,907.23</b>
WINDSOR	759	\$ 14,907.23
WORTHINGTON	1,208	\$ 14,907.23
	6,155,798	\$ 9,800,000.00

## FY03 Firefighter Public Safety Equipment Grant Awards

<b>Town</b>	<b>Department</b>	<b>Award</b>
Abington	Abington Fire Department	21,000.00
Acton	Acton Fire Department	31,000.00
Acushnet	Acushnet Fire Department	21,000.00
Adams	Adams Fire Department	21,000.00
Agawam	Agawam Fire Department	31,000.00
Alford	Alford Fire Department	15,000.00
Amesbury	Amesbury Fire Department	31,000.00
Amherst	Amherst Fire Department	41,000.00
Andover	Andover Fire Department	41,000.00
Aquinnah	Aquinnah Fire Department	15,000.00
Arlington	Arlington Fire Department	41,000.00
Ashburnham	Ashburnham Fire Department	21,000.00
Ashby	Ashby Fire Department	15,000.00
Ashfield	Ashfield Fire Department	15,000.00
Ashland	Ashland Fire Department	21,000.00
Athol	Athol Fire Department	21,000.00
Attleboro	Attleboro Fire Department	41,000.00
Auburn	Auburn Fire Department	31,000.00
Avon	Avon Fire Department	15,000.00
Ayer	Ayer Fire Department	21,000.00
Barnstable FD	Barnstable Fire Department	15,000.00
Barre	Barre Fire Department	21,000.00
Becket	Becket Fire Department	15,000.00
Bedford	Bedford Fire Department	21,000.00
Belchertown	Belchertown Fire Department	21,000.00
Bellingham	Bellingham Fire Department	31,000.00
Belmont	Belmont Fire Department	31,000.00
Berkley	Berkley Fire & Rescue	21,000.00
Berlin	Berlin Fire Department	15,000.00
Bernardston	Bernardston Fire Department	15,000.00
Beverly	Beverly Fire Department	41,000.00
Billerica	Billerica Fire Department	41,000.00
Blackstone	Blackstone Fire Department	21,000.00
Blandford	Blandford Fire Department	15,000.00
Bolton	Bolton Fire Department	15,000.00
Palmer Bondsville FD	Bondsville Fire Department	15,000.00
Boston	Boston Fire Department	264,000.00
Bourne	Bourne Fire Department	31,000.00
Boxborough	Boxborough Fire Department	15,000.00
Boxford	Boxford Fire Department	21,000.00
Braintree	Braintree Fire Department	41,000.00
Brewster	Brewster Fire Department	21,000.00
Bridgewater	Bridgewater Fire Department	31,000.00
Brimfield	Brimfield Fire Department	15,000.00
Brockton	Brockton Fire Department	102,000.00
Brookfield	Brookfield Fire Department	15,000.00
Brookline	Brookline Fire Department	60,000.00
Buckland	Buckland Fire District	15,000.00
Burlington	Burlington Fire Department	31,000.00

Cambridge	Cambridge Fire Department	102,000.00
Canton	Canton Fire Department	31,000.00
Carlisle	Carlisle Fire Department	15,000.00
Carver	Carver Fire Department	21,000.00
Barnstable Center/Oster/MM FD	C-O-M-M Fire District	31,000.00
Charlemont	Charlemont Fire Department	15,000.00
Charlton	Charlton Fire Department	21,000.00
Chatham	Chatham Fire Rescue Department	21,000.00
Chelmsford	Chelmsford Fire Department	41,000.00
Chelsea	Chelsea Fire Department	41,000.00
Cheshire	Cheshire Fire Department	15,000.00
Chester	Chester Fire Department	15,000.00
Chesterfield	Chesterfield Fire Department	15,000.00
Chicopee	Chicopee Fire Department	60,000.00
Chilmark	Chilmark Fire Department	15,000.00
Clarksburg	Clarksburg Vol. Fire Department	15,000.00
Clinton	Clinton Fire Department	21,000.00
Cohasset	Cohasset Fire Department	21,000.00
Colrain	Colrain Fire Department	15,000.00
Concord	Concord Fire Department	31,000.00
Conway	Conway Fire Department	15,000.00
Barnstable Cotuit FD	Cotuit Fire Department	15,000.00
Cummington	Cummington Fire Department	15,000.00
Dalton	Dalton Fire Department	21,000.00
Danvers	Danvers Fire Department	31,000.00
Dartmouth FD 1	Dartmouth Dist.1 Fire Department	31,000.00
Dartmouth FD 2	Dartmouth Dist.2 Fire Department	21,000.00
Dartmouth FD 3	Dartmouth Dist.3 Fire Department	21,000.00
Dedham	Dedham Fire Department	31,000.00
Deerfield	Deerfield Fire Department	15,000.00
Dennis	Dennis Fire Department	31,000.00
Devens FD	Devens Fire Department	15,000.00
Dighton	Dighton Fire Department	21,000.00
Douglas	Douglas Fire Department	21,000.00
Dover	Dover Fire Department	21,000.00
Dracut	Dracut Fire Department	31,000.00
Dudley	Dudley Fire Department	21,000.00
Duxbury	Duxbury Fire Department	21,000.00
East Bridgewater	East Bridgewater Fire Department	21,000.00
East Brookfield	East Brookfield Fire Department	15,000.00
East Longmeadow	East Longmeadow Fire Dept	21,000.00
Eastham	Eastham Fire Department	21,000.00
Easthampton	Easthampton Fire Department	31,000.00
Easton	Easton Fire & Rescue Department	31,000.00
Edgartown	Edgartown Fire Department	15,000.00
Egremont	Egremont Fire Department	15,000.00
Erving	Erving Fire Department	15,000.00
Essex	Essex Fire Department	15,000.00
Everett	Everett Fire Department	41,000.00
Fairhaven	Fairhaven Fire Department	31,000.00
Fall River	Fall River Fire Department	102,000.00
Falmouth	Falmouth Fire Rescue	41,000.00



Fitchburg	Fitchburg Fire Department	41,000.00
Florida	Florida Fire Department	15,000.00
Foxborough	Foxborough Fire & Rescue	31,000.00
Framingham	Framingham Fire Dept	60,000.00
Franklin	Franklin Fire Department	31,000.00
Freetown	Freetown Fire Department	21,000.00
Gardner	Gardner Fire Department	31,000.00
Georgetown	Georgetown Fire Department	21,000.00
Gill	Gill Fire Department	15,000.00
Gloucester	Gloucester Fire Department	41,000.00
Goshen	Goshen Fire Department	15,000.00
Gosnold	Gosnold Fire Department	15,000.00
Grafton	Grafton Fire Department	21,000.00
Granby	Granby Fire Department	21,000.00
Granville	Granville Fire Department	15,000.00
Great Barrington	Great Barrington Fire Department	21,000.00
Greenfield	Greenfield Fire Department	31,000.00
Groton	Groton Fire Department	21,000.00
Groveland	Groveland Fire Department	21,000.00
Hadley	Hadley Fire Department	15,000.00
Halifax	Halifax Fire Department	21,000.00
Hamilton	Hamilton Fire Department	21,000.00
Hampden	Hampden Fire Department	21,000.00
Hancock	Hancock Fire Department	15,000.00
Hanover	Hanover Fire Department	21,000.00
Hanson	Hanson Fire Department	21,000.00
Hardwick	Hardwick Fire Department	15,000.00
Harvard	Harvard Fire Department	21,000.00
Harwich	Harwich Fire Department	21,000.00
Hatfield	Hatfield Fire Department	15,000.00
Haverhill	Haverhill Fire Department	60,000.00
Hawley	Hawley Fire Department	15,000.00
Heath	Heath Fire Department	15,000.00
Hingham	Hingham Fire Department	31,000.00
Hinsdale	Hinsdale Fire Department	15,000.00
Holbrook	Holbrook Fire Department	21,000.00
Holden	Holden Fire Department	31,000.00
Holland	Holland Fire Department	15,000.00
Holliston	Holliston Fire Department	21,000.00
Holyoke	Holyoke Fire Department	41,000.00
Hopedale	Hopedale Fire Department	21,000.00
Hopkinton	Hopkinton Fire Department	21,000.00
Hubbardston	Hubbardston Fire Department	15,000.00
Hudson	Hudson Fire Department	31,000.00
Hull	Hull Fire Department	21,000.00
Huntington	Huntington Fire Department	15,000.00
Barnstable Hyannis FD	Hyannis Fire Department	21,000.00
Ipswich	Ipswich Fire Department	21,000.00
Kingston	Kingston Fire Department	21,000.00
Lakeville	Lakeville Fire Department	21,000.00
Lancaster	Lancaster Fire Department	21,000.00
Lanesborough	Lanesboro Fire Department	15,000.00

Lawrence	Lawrence Fire Department	60,000.00
Lee	Lee Fire Department	21,000.00
Leicester	Leicester Fire Department	21,000.00
Lenox	Lenox Fire Department	21,000.00
Leominster	Leominster Fire Department	41,000.00
Leverett	Leverett Fire Department	15,000.00
Lexington	Lexington Fire Department	41,000.00
Leyden	Leyden Fire Department	15,000.00
Lincoln	Lincoln Fire Department	21,000.00
Littleton	Littleton Fire Department	21,000.00
Longmeadow	Longmeadow Fire Department	31,000.00
Lowell	Lowell Fire Department	102,000.00
Ludlow	Ludlow Fire Department	31,000.00
Lunenburg	Lunenburg Fire Department	21,000.00
Lynn	Lynn Fire Department	60,000.00
Lynnfield	Lynnfield Fire Department	21,000.00
Malden	Malden Fire Department	60,000.00
Manchester-by-the-Sea	Manchester Fire Department	21,000.00
Mansfield	Mansfield Fire Department	31,000.00
Marblehead	Marblehead Fire Department	31,000.00
Marion	Marion Fire Department	21,000.00
Marlborough	Marlborough Fire Department	41,000.00
Marshfield	Marshfield Fire Department	31,000.00
Mashpee	Mashpee Fire & Rescue Dept.	21,000.00
Massport Fire	Massport Fire-Rescue	13,000.00
Mattapoisett	Mattapoisett Fire Department	21,000.00
Maynard	Maynard Fire Department	21,000.00
Medfield	Medfield Fire Department	21,000.00
Medford	Medford Fire Department	60,000.00
Medway	Medway Fire Department	21,000.00
Melrose	Melrose Fire Department	31,000.00
Mendon	Mendon Fire Department	21,000.00
Merrimac	Merrimac Fire Department	21,000.00
Methuen	Methuen Fire Department	41,000.00
Middleborough	Middleboro Fire Department	31,000.00
Middlefield	Middlefield Fire Department	15,000.00
Middleton	Middleton Fire Department	21,000.00
Milford	Milford Fire Department	31,000.00
Millbury	Millbury Fire Department	21,000.00
Millis	Millis Fire Department	21,000.00
Millville	Millville Fire Department	15,000.00
Milton	Milton Fire Department	31,000.00
Monroe	Monroe Fire Department	15,000.00
Monson	Monson Fire Department	21,000.00
Montague FD	Montague Fire Department	15,000.00
Monterey	Monterey Fire Department	15,000.00
Nahant	Nahant Fire Department	15,000.00
Nantucket	Nantucket Fire Department	21,000.00
Natick	Natick Fire Department	41,000.00
Needham	Needham Fire Department	31,000.00
New Ashford	New Ashford Fire Department	15,000.00
New Bedford	New Bedford Fire Department	102,000.00

New Braintree	New Braintree Fire Department	15,000.00
New Marlborough	New Marlborough Fire Department	15,000.00
New Salem	New Salem Fire Department	15,000.00
Newbury FD	Newbury Fire Department	21,000.00
Newburyport	Newburyport Fire Department	31,000.00
Newton	Newton Fire Department	60,000.00
Norfolk	Norfolk Fire Department	21,000.00
North Adams	North Adams Fire Department	21,000.00
North Andover	North Andover Fire Department	31,000.00
North Attleborough	North Attleboro Fire Department	31,000.00
North Brookfield	North Brookfield Fire Department	15,000.00
North Reading	North Reading Fire Department	21,000.00
Northampton	Northampton Fire Department	31,000.00
Northborough	Northborough Fire Department	21,000.00
Northbridge	Northbridge Fire Department	21,000.00
Norton	Norton Fire Department	31,000.00
Norwell	Norwell Fire Department	21,000.00
Norwood	Norwood Fire Department	31,000.00
Oak Bluffs	Oak Bluffs Fire Department	15,000.00
Oakham	Oakham Fire Department	15,000.00
Wareham Onset FD	Onset Fire Department	15,000.00
Orange	Orange Fire Department	21,000.00
Orleans	Orleans Fire Department	21,000.00
Otis	Otis Fire Department	15,000.00
Oxford	Oxford Fire Department	21,000.00
Palmer FD	Palmer Fire Department	21,000.00
Paxton	Paxton Fire Department	15,000.00
Peabody	Peabody Fire Department	41,000.00
Pelham	Pelham Fire Department	15,000.00
Pembroke	Pembroke Fire Department	31,000.00
Pepperell	Pepperell Fire Department	21,000.00
Peru	Peru Fire Department	15,000.00
Petersham	Petersham Fire Department	15,000.00
Phillipston	Phillipston Fire Department	15,000.00
Pittsfield	Pittsfield Fire Department	41,000.00
Plainfield	Plainfield Fire Department	15,000.00
Plainville	Plainville Fire Department	21,000.00
Plymouth	Plymouth Fire Department	60,000.00
Plympton	Plympton Fire Department	15,000.00
Princeton	Princeton Fire Department	15,000.00
Provincetown	Provincetown Fire Department	15,000.00
Quincy	Quincy Fire Department	60,000.00
Randolph	Randolph Fire Department	41,000.00
Raynham	Raynham Fire Department	21,000.00
Reading	Reading Fire Department	31,000.00
Rehoboth	Rehoboth Fire Department	21,000.00
Revere	Revere Fire Department	41,000.00
Richmond	Richmond Fire Department	15,000.00
Rochester	Rochester Fire Department	15,000.00
Rockland	Rockland Fire Department	31,000.00
Rockport	Rockport Fire Department	21,000.00
Rowe	Rowe Fire Department	15,000.00



Rowley	Rowley Fire Department	21,000.00
Russell	Russell Fire Department	15,000.00
Rutland	Rutland Fire Department	21,000.00
Salem	Salem Fire Department	41,000.00
Salisbury	Salisbury Fire Department	21,000.00
Sandisfield	Sandisfield Fire Department	15,000.00
Sandwich	Sandwich Fire Department	31,000.00
Saugus	Saugus Fire Department	31,000.00
Savoy	Savoy Fire Department	15,000.00
Scituate	Scituate Fire Department	31,000.00
Seekonk	Seekonk Fire Department	21,000.00
Sharon	Sharon Fire Department	31,000.00
Sheffield	Sheffield Fire Department	15,000.00
Shelburne Falls FD	Shelburne Falls Fire/Rescue/EMS	15,000.00
Shelburne FD	Shelburne Fire Department	15,000.00
Sherborn	Sherborn Fire Department	15,000.00
Shirley	Shirley Fire Department	21,000.00
Shrewsbury	Shrewsbury Fire Department	41,000.00
Shutesbury	Shutesbury Fire Department	15,000.00
Somerset	Somerset Fire Department	31,000.00
Somerville	Somerville Fire Department	60,000.00
South Deerfield	South Deerfield Fire Department	15,000.00
South Hadley FD 1	South Hadley-District 1	21,000.00
South Hadley FD 2	South Hadley-District 2	21,000.00
Southampton	Southampton Fire Department	21,000.00
Southborough	Southborough Fire Department	21,000.00
Southbridge	Southbridge Fire Department	31,000.00
Southwick	Southwick Fire Department	21,000.00
Spencer	Spencer Fire Department	21,000.00
Springfield	Springfield Fire Department	102,000.00
Sterling	Sterling Fire Department	21,000.00
Stockbridge	Stockbridge Fire Department	15,000.00
Stoneham	Stoneham Fire Department	31,000.00
Stoughton	Stoughton Fire Department	31,000.00
Stow	Stow Fire Department	21,000.00
Sturbridge	Sturbridge Fire Department	21,000.00
Sudbury	Sudbury Fire Department	31,000.00
Sunderland	Sunderland Fire Department	15,000.00
Sutton	Sutton Fire Department	21,000.00
Swampscott	Swampscott Fire Department	21,000.00
Swansea	Swansea Fire Department	31,000.00
Taunton	Taunton Fire Department	60,000.00
Templeton	Templeton Fire Department	21,000.00
Tewksbury	Tewksbury Fire Department	31,000.00
Palmer Three Rivers	Three Rivers Fire Department	15,000.00
Tisbury	Tisbury Fire Department	15,000.00
Tolland	Tolland Fire Department	15,000.00
Topsfield	Topsfield Fire Department	21,000.00
Townsend	Townsend Fire Department	21,000.00
Truro	Truro Fire Department	15,000.00
Montague Turners Falls FD	Turners Falls Fire Department	21,000.00
Tyngsborough	Tyngsboro Fire Department	21,000.00

Tyringham	Tyringham Fire Department	15,000.00
Upton	Upton Fire Department	21,000.00
Uxbridge	Uxbridge Fire Department	21,000.00
Wakefield	Wakefield Fire Department	31,000.00
Walpole	Walpole Fire Department	31,000.00
Waltham	Waltham Fire Department	60,000.00
Ware	Ware Fire Department	21,000.00
Wareham FD	Wareham Fire Department	31,000.00
Warren	Warren Fire Department	15,000.00
Warwick	Warwick Fire Department	15,000.00
Washington	Washington Fire Department	15,000.00
Watertown	Watertown Fire Department	41,000.00
Wayland	Wayland Fire Department	21,000.00
Webster	Webster Fire Department	31,000.00
Wellesley	Wellesley Fire Department	31,000.00
Wellfleet	Wellfleet Fire Department	15,000.00
Wendell	Wendell Fire Department	15,000.00
Wenham	Wenham Fire Department	15,000.00
Barnstable W.Barnstable FD	West Barnstable Fire Department	15,000.00
West Boylston	West Boylston Fire Department	21,000.00
West Bridgewater	West Bridgewater Fire Department	21,000.00
West Brookfield	West Brookfield Fire Department	15,000.00
West Newbury	West Newbury Fire Department	15,000.00
West Springfield	West Springfield Fire Department	31,000.00
West Stockbridge	West Stockbridge Fire Department	15,000.00
West Tisbury	West Tisbury Fire Department	15,000.00
Westborough	Westborough Fire Department	31,000.00
Westfield	Westfield Fire Department	41,000.00
Westford	Westford Fire Department	31,000.00
Westhampton	Westhampton Fire Department	15,000.00
Westminster	Westminster Fire Department	21,000.00
Weston	Weston Fire Department	21,000.00
Westport	Westport Fire Department	21,000.00
Westwood	Westwood Fire Department	21,000.00
Weymouth	Weymouth Fire Department	60,000.00
Whately	Whately Fire Department	15,000.00
Whitman	Whitman Fire-Rescue	21,000.00
Wilbraham	Wilbraham Fire Department	21,000.00
Williamsburg	Williamsburg Fire Department	15,000.00
Williamstown	Williamstown Fire Department	21,000.00
Wilmington	Wilmington Fire Department	31,000.00
Winchendon	Winchendon Fire Department	21,000.00
Winchester	Winchester Fire Department	31,000.00
Windsor	Windsor Fire Department	15,000.00
Winthrop	Winthrop Fire Department	31,000.00
Woburn	Woburn Fire Department	41,000.00
Worcester	Worcester Fire Department	102,000.00
Worthington	Worthington Fire - Rescue	15,000.00
Wrentham	Wrentham Fire Department	21,000.00
Yarmouth	Yarmouth Fire Department	31,000.00

## *Endnotes*

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<sup>i</sup> National Fire Protection Association *U.S. Experience with Sprinklers*

<sup>ii</sup> Information Obtained from H.R. 1824; <http://thomas.loc.gov>

<sup>iii</sup> Commonwealth of Massachusetts State Building Code, 780 CMR; 920.2

<sup>iv</sup> “21 Die in Stampede of 1,500 at Chicago Nightclub” by Jodi Wilgoren,  
The New York Times, February 18<sup>th</sup> 2003

<sup>v</sup> Massachusetts General Laws Chapter 111 §51 & §71



